DOCUMENT RESUME

ED 294 504 HE 021 477

AUTHOR Foyle, Harvey C.
TITLE Homework: Suggestions for Educators.
PUB DATE 19 Jan 88
NOTE 11p.; Paper presented at a Meeting of the Hutchinson Chapter of Phi Delta Kappa (McPherson, KS, January 19, 1988).
PUB TYPE Information Analyses (070) -- Speeches/Conference Papers (150)

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS *Academic Achievement; *College Students; Educational Research; *Elementary School Students; Elementary Secondary Education; Higher Education; *Homework; Learning Strategies; *Secondary School Students

ABSTRACT

Implications of homework as a strategy for educators are considered, based on review of over 1,000 articles and over 84 homework experiments conducted between 1904 and 1984. Homework was defined as taking books and assignments home after school for the purpose of home study. Foyle and Bailey elaborated four types of homework categorized by purpose: preparation, practice, extension, and creative. Of the 84 experiments that dealt with homework, 34 found a significant difference in favor of homework over other methods of learning; 6 found a significant difference in favor of other method of learning than homework, and 49 experiments found that homework and other methods of learning produced similar results in student achievement. Since 1957, 59 of 65 cited homework experiments were conducted in mathematics, mathematics-related subjects, and shorthand. Examining the results of the experiments by level indicate: at the elementary and secondary levels, homework produces student achievement, while at the college level no difference is found between homework and other methods. Data are provided on the link between homework and achievement by level for the periods of 1904-1957 and 1958-1984. Recommendations for each school level are also presented. 35 references. (SW)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED294504

HOMEWORK: SUGGESTIONS FOR EDUCATORS

Harvey C. Foyle, Ph.D.
Assistant Professor of Education
College of Education
Emporia State University
Emporia, Kansas 66801

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

Harvey C. Foyle

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

✓ This document has been reproduced as received from the person or organization originating it.

☐ Minor changes have been made to improve reproduction quality.

• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

A paper presented at a meeting of the
Hutchinson Chapter of Phi Delta Kappa
McPherson, Kansas
January 19, 1988

BEST COPY AVAILABLE

HE 021 477

Homework causes much debate in educational circles. Often educators speak from the perspective of personal experience or the reading of limited articles. However, a broader perspective should be taken in examining the topic of homework. With that concept in mind, over 1000 written articles were examined and over 84 homework experiments were reviewed. What are some of the implications of homework as a strategy for educators today?

Definition of terms

Homework was defined as the taking of books and assignments home after school for the purpose of home study. Elementary school included kindergarten through eighth grade. Secondary school included ninth through twelfth grade. College included courses at the undergraduate and graduate levels in junior colleges, four year colleges, and universities.

Review of the literature

Any citations not specifically found in the selected references are located in Foyle & Bailey (1984). Homework was a topic of debate as early as 1842 in England (Gordon, 1980). In 1892, an early edition of the Cyclopaedia of Education indicated that children under nine years of age could not prepare new work at home. Thus, they should not be given any home-lessons. Homework experimental research was cited in Germany as early as 1904 (Simmons, 1921). In 1913 Ladies' Home Journal conducted a survey of administrators, medical doctors, and parents about the effects of homework on children. The magazine stated that homework should cease in the public schools ("The first step", 1913). The homework debate has ebbed and flowed ever since that time.

Goldstein (1960) examined 17 experimental research reports from the thirty years preceding 1959. Goldstein concluded that results were mixed due to limited and inadequate studies, but that experimental data supported achievement gains due to homework. Leonard (1965) found that planned, systematic, instructional homework procedures produced positive achievement results. Friesen (1979) reviewed 24 homework-versus-no-homework studies that were conducted between 1923 and 1976 and found no clear-cut endorsement for either homework or no homework. Coulter (1980) examined the homework literature and concluded that certain kinds of regularly assigned homework affected school achievement, however, "fifty years of research on homework have yielded little information that might guide teachers or administrators in setting policy or in adopting strategies that will maximize pupil participation and achievement" (p. 26). Knorr (1981) concluded that the question of the relationship of homework to achievement remained unresolved. Rickards (1982) stated "I am reasonably sure that homework of the right kind given under the right set of conditions positively influences academic achievement. What is needed is more well-designed and well-executed experimental

research aimed at systematically examining different kinds of homework under different sorts of conditions" (p. 833). Strother (1984) summarized homework findings by stating that "research does not tell us what kind of homework works best for what kind of learner. We do have some insights into the kinds of homework that teachers can assign, however" (p. 425). Foyle & Bailey (1985) developed research-based homework guidelines. They, also, elaborated four types of homework categorized by purpose: preparation, practice, extension, creative.

Experiments in total

There were 84 experiments that were conducted between 1904 and 1984 and that dealt with some aspect of homework (Foyle & Bailey, 1984). The period of time after the launching of the first artificial earth satellite (Russia's Sputnik I in October 1957) seems to be a watershed for homework. Prior to Sputnik there were 18 homework experiments. After Sputnik there were 66 homework experiments. Homework experiments can be divided into three categories according to statistical findings: a significant difference in favor of homework, no significant difference between homework and another method, and a significant difference in favor of a method other than homework. Also, the experiments can be divided into educational levels: elementary school, secondary school, and college.

Examining all homework experiments as one group, experiments found mixed results. Thirty-four experiments found a significant difference in favor of homework over other methods of learning. Six experiments found a significant difference in favor of other methods of learning than homework. Forty-eight experiments found that homework and other methods of learning produced similar results in student achievement. The number of results (88) is greater than the actual number of experiments (84) due to multiple conclusions in one experiment and multiple grade levels in another experiment. Two experiments contained both elementary school and secondary school grade levels. One high school experiment found mixed results and reported in three subject areas. The primary subject area for homework experimentation was mathematics (Austin, 1979). Since 1957, fifty-nine out of sixty-five cited homework experiments were conducted in mathematics, mathematics-related subjects, and shorthand. The results of these 84 experiments are found in Table 1.

TABLE 1

Homework Experiments

By level, occurrence and results

Results	Elementary		High School		College	
	1904-57	1958-84	1904-57	1958-84	1904-57	1958-84
Homework	4	13	3	6	0	8
No sig. diff.	3	9	4	7	0	25
Other method	4	0	2	0	0	0
Total	11	22	9	13	0	33

Experiments by level

When homework experiments are examined by grade levels, the results are clearer. At the elementary school level and secondary school level, homework produces student achievement. At the college level no difference is found between homework and other methods. After a review of the literature, the following implications or recommendations for each level can be made. A supporting table is included for each level.

Elementary school level

1. Homework produced higher student achievement than no homework.

2. Required homework produced higher student achievement than voluntary or encouraged homework.

3. Individualized homework produced higher student achievement.

4. Feedback and reinforcement produced higher student achievement.

Table 2

Elementary School Homework Experiments

By grade level and number of experiments

Grade	Number
K	0
1	0
2	0
3	3
4	7
5	11
6	15
7	10
8	9
Total	55

Secondary school level

1. Assign homework.
2. Provide time in class to do homework.
3. Make a portion of homework assignments voluntary and nonwritten.
4. Provide some forms of reinforcement to students.
5. Reduce teacher time spent on homework.
6. Provide different types of homework for variety.

Table 3

Secondary School Homework Experiments

By subject and number of experiments

Subject	Number
Mathematics	14
Social Studies	6
English	1
Latin	1
Total	22

One experiment (Breed, 1919) was conducted in multiple subject areas hence the number of actual experiments (20) is exceeded by the number of subject areas (22) in which the experiments were conducted.

College level

1. Homework experiments should no longer be conducted in subject areas that deal with practice homework. Generally, other methods work as well as traditional homework in these areas.

2. Homework experiments need to be conducted in subject areas that deal with preparation homework, such as English, history, social sciences, and other reading type courses.

3. Homework experiments should be conducted specifically using extension homework and creativity homework. (Lee & Pruitt, 1979)

4. The personality and teaching style of the instructor may be more important than the method of instruction and various aspects of homework (Mason, 1967). Homework experiments should be conducted that relate homework to those factors.

Table 4

College Homework Experiments

By subject and number of experiments

Subject	Number
Mathematics	24
Mathematics-related	3
Shorthand	5
Spanish	1
Total	33

Suggestions for Educators

1. Current research findings on student achievement and homework should be provided to teachers at all levels. Some reviewers study a limited number of experiments and draw varying conclusions.

2. Since homework increases student achievement at the elementary and secondary school levels, the use of homework as a strategy should be encouraged.

3. At the college level, homework should be used at the discretion of the instructor. In terms of student achievement, other methods are equal to the assignment of homework.

4. One word of caution: There are methodologies that do not use homework and still increase student achievement, e.g. cooperative learning, programmed learning.

Selected References

There are 186 of the key homework citations found in Homework: Selected References. It contains a variety of references: books, viewpoint articles, empirical research, experimental research, and reviews of the literature. Any one interested in additional homework information should start with that source.

Berliner, D. & Casanova, U. (November/December, 1985). Why what you write on homework papers counts. Instructor. 95(4): 14-15.

Bradshaw, J. (1985). Homework: Helping Students Achieve. Arlington, Virginia: American Association of School Administrators.

Dougherty, C. (1985, March 27). The value of homework: Better class performance. USA Today. 3D.

England, D. A. & Flatley, J. K. (1985). Homework - And Why. (Fastback No. 218). Bloomington, Indiana: Phi Delta Kappa Educational Foundation.

Epstein, J. L. & Becker, H. J. (1982). Teachers' reported practices of parent involvement: Problems and possibilities. Elementary School Journal, 83, 103-113.

Featherstone, H. (February, 1985). Homework. The Harvard Education Letter. 1(1): 1-4.

Featherstone, H. (November, 1985). What does homework accomplish? Principal (NAESP). 65(2): 6-7.

Foyle, H. C. (1975). How to develop a learning package curriculum. (ERIC Document Reproduction Service No. ED 115 573.)

Foyle, H. C. (1985, November 23). Homework Variety: A way to educational excellence. An unpublished paper presented at the 65th Annual Meeting of the National Council for the Social Studies, Chicago, Illinois.

Foyle, H. C. (February, 1986). Homework: The connection between school and home. NASSP Bulletin. 70(487): 36-38.

Foyle, H. C. (1986, June 18). Critique of 'What Works' 'Hits Mark', but booklet's homework ideas backed. Education Week. 5(39): 26.

Foyle, H. C. (in press). Homework. A videotape. Livingston, New Jersey: Instructivision.

Foyle, H. C. (in press). Homework. A book. Portland, Maine: J. Westin Walch, Publisher.

Foyle, H. C. & Bailey, G. D. (in press). Homework experiments in social studies: Implications for Teaching. Social Education. Washington, D. C.: The National Council for the Social Studies.

Foyle, H. C. & Bailey, G. D. (1984). Homework: Selected references. (ERIC Document Reproduction Service No. ED 250 275)

Foyle, H. C. & Bailey, G. D. (1985). Homework in the classroom: Can it make a difference in student achievement? A paper presented at the 40th Annual Conference of the Association for Supervision and Curriculum Development (ASCD), Chicago, Illinois, March 25, 1985. (ERIC Document Reproduction Service No. ED 257 796)

Foyle, H. C. & Bailey, G. D. (Winter, 1985). Homework Implementation: Covering the bases. Educational Considerations. (Kansas State University, Manhattan, Kansas) 12(1): 17-18.

Foyle, H. C. & Bailey, G. D. (Spring, 1985). A homework guide: Winning the game of student achievement. Kappa Delta Pi Record. Lafayette, Indiana: Kappa Delta Pi. 21(3): 68-70.

Foyle, H. C. & Bailey, G. D. (1986, March 2). Homework: The human relations bridge between school and home. A paper presented at the 41st Annual Conference of the Association for Supervision and Curriculum Development, San Francisco, California. (ERIC Document Reproduction Service No. ED 268 106)

Foyle, H. C. & Bailey, G. D. (Winter, 1986). High school homework: Increasing student achievement. Illinois School Research and Development. 22(2): 71-77.

Foyle, H. C. & Bailey, G. D. (December, 1986). Homework: Its Real Purpose. The Clearing House. 60(4): 187-188.

Homework policies of San Mateo County school districts. (1983). San Mateo County Office of Education, Redwood City, California. (ERIC Document Reproduction Service No. ED 233 463)

Homework practices in FWISD, Fall, 1983. (1983). Fort Worth Independent School District, Texas Department of Research and Evaluation. (ERIC Document Reproduction Service No. ED 249 238)

Homework surveys for teachers, parents, and students. (1983). Belmont Elementary School District, Belmont, California. (ERIC Document Reproduction Service No. ED 233 464)

Hunter, M. (1981). Homework: An asset to learning or a waste of time? UCLA unpublished paper. Los Angeles: University Elementary School.

Hunter, M. (1975). Mastery Teaching. El Segundo, California: TIP Publications.

Keith, T. (1986). Homework. Kappa Delta Pi Classroom Practice Series. Lafayette, Indiana: Kappa Delta Pi.

LaConte, R. T. & Doyle, M. A. (1986). Homework as a learning experience. (What research says to the teacher series, 2nd ed.). Washington, D. C.: National Education Association.

McDermott, R. P., Goldman, S. V., & Varenne, H. (1984). When school goes home: Some problems in the organization of homework. Teachers College Record, 85(3), 391-409.

Paschal, R. A., Weinstein, T. & Walberg, H. J. (1984). The effects of homework on learning: A quantitative synthesis. Journal of Educational Research. 78(2): 97-104.

Pendergrass, R. A. (March, 1985). Homework: Is it really a basic? The Clearing House. 58(7): 310-314.

Snider, W. (1986, June 11). Chicago board adopts strict homework policy. Education Week, 5(38), 4.

Tamir, P. (1985). Homework and science learning in secondary schools. Science Education. 69(5): 605-618.

Turvey, J. S. (February, 1986). Homework - Its importance to student achievement. NASSP Bulletin. 70(487): 27-35.

Wood, T. (1984, August 21). School homework making comeback in some districts. The Kansas City Star. 1A, 2A.